AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the application:

1. (Original) A process for trimerisation of olefins which process includes the step of contacting an olefinic feedstream with a catalyst system at a pressure above 100 kPa (1 barg) which catalyst system includes the combination of

- a transition metal compound; and
- a heteroatomic ligand described by the following general formula

$$(R)_nA\text{-}B\text{-}C(R)_m$$

where

A and C are independently selected from the group consisting of phosphorus, arsenic, antimony, oxygen, bismuth, sulphur, selenium, and nitrogen;

B is a linking group between A and C and is selected to exclude $(CH_2)_xY(CH_2)_y$, where Y is $-P(R^6)-,-N(R^6)-,-As(R^6)-,-Sb(R^6)-$ or -S- and x and y are individually 1- 15 and wherein R^6 is selected from the group consisting of hydrogen, a halogen, a nitro group, or a hydrocarbyl group and a substituted hydrocarbyl group;

the R-groups are the same or different, and each R is independently selected from any homo or hetero hydrocarbyl group, and without any electron donating substituents on R; and

n and m is each determined by the respective valence and oxidation state of A and C.

2. (Original) The process as claimed in claim 1, wherein the ligand is described by the following general formula $(R^1)(R^2)A\text{-}B\text{-}C(R^3)(R^4)$ where A and C are independently selected from the group consisting of phosphorus, arsenic, antimony, bismuth, and nitrogen; B is as defined in claim 1 and R^1, R^2, R^3 and R^4 are each independently selected from the group consisting of a hydrocarbyl group, a substituted hydrocarbyl group a heterohydrocarbyl group and a substituted hetero hydrocarbyl group.

3. (Original) The process as claimed in claim 2, wherein R^1, R^2, R^3 and R^4 are independently selected from aromatic, including hetero aromatic, groups of which two or more of R^1, R^2, R^3 and R^4 are substituted on the atom adjacent to the atom bound to A or C.

4. (Original) The process as claimed in claim 2, wherein all of R^1, R^2, R^3 and R^4 have non-electron donating substituents on the atom adjacent to the atom bound to A and C.

5. (Currently amended) The process as claimed in ~~any one of claims~~ claim 1 **[[**to 4**]]**, wherein any non-electron donating substituent is non-polar.

6. (Currently amended) The process as claimed in ~~any one of claims~~ claim 1 **[[**to 5**]]**, wherein ethylene is contacted with the catalyst system at a pressure of more than 10 barg.

7. (Currently amended) The process as claimed in ~~any one of claims~~ claim 1 **[[**to 6**]]**, wherein B is selected from the group consisting of an organic linking group containing a hydrocarbyl, substituted hydrocarbyl, heterohydrocarbyl and a substituted heterohydrocarbyl group; an inorganic linking group comprising a single atom linking

spacer; and a group comprising methylene, dimethylmethylene, 1,2-ethane, 1,2-phenylene, 1,2-propane, 1,2-catechol, 1,2-dimethylhydrazine, -B(R^5)-, -Si(R^5)$_2$-, -P(R^5)- and -N(R^5)- where R^5 is hydrogen, a hydrocarbyl or substituted hydrocarbyl, a substituted heteroatom and a halogen.

8. (Currently amended) The process as claimed in ~~any one of claims~~ claim 1 **[[**to 7**]]**, wherein B is a single atom linking spacer.

9. (Currently amended) The process as claimed in ~~any one of claims~~ claim 1 **[[**to 8**]]**, wherein B is -N(R^5)-, wherein R^5 is selected from the group consisting of hydrogen, alkyl, substituted alkyl, aryl, substituted aryl, aryloxy, substituted aryloxy, halogen, nitro, alkoxycarbonyl, carbonyloxy, alkoxy, aminocarbonyl, carbonylamino, dialkylamino, silyl groups or derivatives thereof, and an aryl group substituted with any of these substituents.

10. (Currently amended) The process as claimed in ~~any one of claims~~ claim 1 **[[**to 9**]]**, wherein A and/or C is independently oxidised by S, Se, N or O, where the valence of A and/or C allows for such oxidation.

11. (Currently amended) The process as claimed in ~~any one of claims~~ claim 1 **[[**to 9**]]**, wherein A and C is independently phosphorus or phosphorus oxidised by S or Se or N or O.

12. (Original) The process as claimed in claim 2, wherein R^1, R^2, R^3 and R^4 are independently selected from the group consisting of methyl, ethyl, ethylenyl, propyl, propenyl, propynyl, butyl, cyclohexyl, 2-methylcyclohexyl, 2-ethylcyclohexyl, 2-isopropylcyclohexyl, benzyl, phenyl, tolyl, xylyl, *o*-methylphenyl, *o*-ethylphenyl, *o*-isopropylphenyl, *o*-*t*-butylphenyl, cumyl, mesityl, biphenyl, naphthyl, anthracenyl,

methoxy, ethoxy, phenoxy, tolyloxy, dimethylamino, thiomethyl, thiophenyl, trimethylsilyl and dimethylhydrazyl group.

13. (Currently amended) The process as claimed in **[[Claim]]** claim 12, wherein R^1, R^2, R^3 and R^4 are independently selected from the group consisting of *o*-methylphenyl, *o*-ethylphenyl, *o*-isopropylphenyl, *o*-*t*-butylphenyl, phenyl, tolyl, biphenyl, and naphthyl group.

14. (Currently amended) The process as claimed in ~~any one of claims~~ claim 1 ~~to 9 and 11 to 13~~ wherein the ligand is selected from the any one of a group consisting of (*o*-ethylphenyl)$_2$PN(methyl)P(*o*-ethylphenyl)$_2$, (*o*-isopropylphenyl)$_2$PN(methyl)P(*o*-isopropylphenyl)$_2$, (*o*-methylphenyl)$_2$PN(methyl)P(*o*-methylphenyl)$_2$, (*o*-ethylphenyl)$_2$PN(methyl)P(*o*-ethylphenyl)(phenyl), (*o*-ethylphenyl)$_2$PN(isopropyl)P(*o*-ethylphenyl)$_2$, (*o*-isopropylphenyl)$_2$PN(isopropyl)P(*o*-isopropylphenyl)$_2$, (*o*-methylphenyl)$_2$PN(isopropyl)P(*o*-methylphenyl)$_2$, (*o*-*t*-butylphenyl)$_2$PN(methyl)P(*o*-*t*-butylphenyl)$_2$, (*o*-*t*-butylphenyl)$_2$PN(isopropyl)P(*o*-*t*-butylphenyl)$_2$, (*o*-ethylphenyl)$_2$PN(pentyl)P(*o*-ethylphenyl)$_2$, (*o*-ethylphenyl)$_2$PN(phenyl)P(*o*-ethylphenyl)$_2$, (*o*-ethylphenyl)$_2$PN(*p*-methoxyphenyl)P(*o*-ethylphenyl)$_2$, (*o*-ethylphenyl)$_2$PN(benzyl)P(*o*-ethylphenyl)$_2$, (*o*-ethylphenyl)$_2$PN(1-cyclohexylethyl)P(*o*-ethylphenyl)$_2$, (*o*-ethylphenyl)$_2$PN(2-methylcyclohexyl)P(*o*-ethylphenyl)$_2$, (*o*-ethylphenyl)$_2$PN(cyclohexyl)P(*o*-ethylphenyl)$_2$, (*o*-ethylphenyl)$_2$PN(allyl)P(*o*-ethylphenyl)$_2$, (3-ethyl-2-thiopheneyl)$_2$PN(methyl)P(3-ethyl-2-thiopheneyl)$_2$, (2-ethyl-3-thiopheneyl)$_2$PN(methyl)P(2-ethyl-3-thiopheneyl)$_2$ and (2-ethyl-4-pyridyl)$_2$PN(methyl)P(2-ethyl-4-pyridyl)$_2$.

15. (Currently amended) The process as claimed in ~~any one of the claims~~ claim 1 **[[**to 14**]]**, wherein the catalyst system is prepared by combining in any order the heteroatomic ligand with the transition metal compound and an activator.

16. (Original) The process as claimed in claim 15, which includes the step of generating a heteroatomic coordination complex *in situ* from the transition metal compound and the heteroatomic ligand.

17. (Currently amended) The process as claimed in ~~any one of the claims~~ claim 1 **[[**to 16**]]**, which process includes the step of adding a pre-formed coordination complex, prepared using the heteroatomic ligand and the transition metal compound, to a reaction mixture containing an activator.

18. (Currently amended) The process as claimed in ~~any one of the claims~~ claim 1 **[[**to 17**]]**, wherein the transition metal in the transition metal compound is selected from the group consisting of chromium, molybdenum, tungsten, titanium, tantalum, vanadium and zirconium.

19. (Original) The process as claimed in claim 18, wherein the transition metal is chromium.

20. (Currently amended) The process as claimed in claim 15 ~~or claim 16~~, wherein the transition metal compound is selected from an inorganic or organic salt, a co-ordination or organometallic complex.

21. (Original) The process as claimed in claim 20, wherein the transition metal compound is selected from the group consisting of chromium trichloride tris-tetrahydrofuran complex, (benzene)tricarbonyl chromium, chromium (III) octanoate,

chromium (III) acetylacetonoate, chromium hexacarbonyl, and chromium (III) 2-ethylhexanoate.

22. (Original) The process as claimed in claim 21, wherein the transition metal compound is selected from a complex selected from chromium (III) acetylacetonoate and chromium (III) 2-ethylhexanoate.

23. (Currently amended) The process as claimed in ~~any one of the claims~~ claim 16 **[[**to 22**]]**, wherein the transition metal compound and heteroatomic ligand are combined to provide a transition metal/ligand ratio from about 0.01:100 to 10 000:1.

24. (Original) The process as claimed in claim 23, wherein the transition metal compound and heteroatomic ligand are combined to provide a transition metal/ligand ratio from about 0.1:1 to 10:1.

25. (Currently amended) The process as claimed in ~~either one of claims~~ claim 15 **[[**or 16**]]**, wherein the activator is selected from the group consisting of an organoaluminium compound, an organoboron compound, an organic salt, such as methyllithium and methylmagnesium bromide, an inorganic acid and salt, such as tetrafluoroboric acid etherate, silver tetrafluoroborate and sodium hexafluoroantimonate.

26. (Orginal) The process as claimed in claim 25, wherein the activator is an alkylaluminoxane.

27. (Original) The process as claimed in claim 26, wherein the alkylaluminoxane, is selected from group which consists of methylaluminoxane (MAO), ethylaluminoxane (EAO) and modified alkylaluminoxanes (MMAO) or mixtures thereof.

28. (Currently amended) The process as claimed in claim 26 ~~or claim 27~~, wherein the transition metal from the transition metal compound and the aluminoxane

are combined in proportions to provide an Al/transition metal ratio from about 1:1 to 10 000:1.

29. (Original) The process as claimed in claim 28, wherein the transition metal compound and the aluminoxane are combined in proportions to provide an Al/transition metal ratio from about 1:1 to 1000:1.

30. (Original) The process as claimed in claim 29, wherein the transition metal compound and the aluminoxane are combined in proportions to provide an Al/transition metal ratio from about 1:1 to 300:1.

31. (Currently amended) The process as claimed in ~~any one of claims~~ claim 26 **[[**to 30**]]**, which includes the step of adding to the catalyst system a trialkylaluminium compound in amounts of between 0.01 to 100 mol per mol of alkylaluminoxane.

32. (Currently amended) The process as claimed in ~~any one of claims~~ claim 1 **[[**to 31**]]**, which includes the step of mixing the components of the catalyst system at any temperature between -20°C and 250°C in the presence of an olefin.

33. (Original) The process as claimed in claim 32, wherein the temperature range is between 20°C and 100°C

34. (Currently amended) The process as claimed in ~~any one of the claims~~ claim 1 **[[**to 33**]]**, wherein the process is carried out at temperatures in the range of 0-120 °C.

35. (Currently amended) The process as claimed in ~~any one of the claims~~ claim 1 **[[**to 33**]]**, wherein the process is carried out at a temperature range from 25-100°C.

36. (Currently amended) The process as claimed in ~~any one of the claims~~ claim 1 **[[**to 35**]]**, which includes the step of adding a polymerisation catalyst so that co-polymerisation of the olefin and trimerisation product occurs simultaneously leading to the incorporation of the trimerisation products into a copolymer.